

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application.

#### **Listing of Claims:**

1. (original) A method of a continuous speech recognition system for discriminatively training hidden Markov models, the method comprising:
  - performing segmentation and recognition of speech training data using a first set of recognition models so as to form a first model reference state sequence, and a set of first model hypothesis state sequences;
  - mapping states in the first model reference state sequence to corresponding states in a second set of recognition models so as to form a second model reference state sequence;
  - mapping states in the set of first model hypothesis sequences to corresponding states in the second set of recognition models so as to form a set of second model hypothesis sequences; and
  - discriminatively training selected model states in the second set of recognition models using the mapped state sequences.
2. (original) A method according to claim 1, wherein the hypothesis state sequences are represented by a lattice structure.
3. (original) A method according to claim 1, wherein the first set of recognition models are detailed match models, and the second set of recognition models are fast match models.

4. (withdrawn) A method of a continuous speech recognition system for discriminatively training hidden Markov models, the method comprising:

for a mixture component of a hidden Markov model state, calculating a gradient adjustment of the standard deviation of the mixture component, and

- i. if the calculated gradient adjustment is greater than a first threshold amount, performing an adjustment of the standard deviation of the mixture component using the first threshold, or
- ii. if the calculated gradient adjustment is less than a second threshold amount, performing an adjustment of the standard deviation of the mixture component using the second threshold, or else
- iii. performing an adjustment of the standard deviation of the mixture component using the calculated gradient adjustment.

5. (withdrawn) A method of a continuous speech recognition system for discriminatively training hidden Markov models, the method comprising:

determining correctness of a hypothesized word using pronunciation of the hypothesized word and a corresponding word in a reference text.